

City of Evansville
Community Development
MINIMUM STANDARDS FOR HOUSING REHABILITATION 2011

Table of Contents

Introduction	1
Explanation of Terms:	
Historic Preservation Process: Section 106 Review (<i>When Required</i>)	
Overview	1
Section 1: Grounds	
Section 2: Accessory Buildings	
Section 3: Exterior of Dwelling Structure	
Section 4: Interior of Dwelling Structure	
Section 5: Food Preparation and Storage	
Section 6: Plumbing	
Section 7: Heating and Air Conditioning	
Section 8: Ventilation	
Section 9: Electrical	
Section 10: Energy Conservation	
Section 11: Occupancy	
Section 12: Fire Safety	
Section 13: Hazardous Materials	
Section 14: Sanitation	
Section 15: Pest Control	
Section 16: Zoning	
Basic Design Standards	1
SECTION 1: GROUNDS.....	1
1-1 Frontage	
1-2 Access	
1-3 Exterior Paving	
1-4 Drainage	
1-5 Landscape	
1-6 Fences	
1-7 Cisterns	
1-8 Retaining Walls	
SECTION 2: ACCESSORY BUILDINGS	1
2-1 Accessory Buildings	
SECTION 3: EXTERIOR OF DWELLING STRUCTURE	1
3-1 Dwelling	
3-2 Foundations	
3-3 Rodent Proofing	
3-4 Walls	
3-5 Roofs	
3-6 Chimney's	
3-7 Gutters	
3-8 Porches and Stairs	
3-9 Handrails and Guardrails	
3-10 Ramps	
3-11 Windows	
3-12 Doors	
SECTION 4: INTERIOR OF DWELLING STRUCTURE	1
4-1 Walls	
4-2 Ceilings	
4-3 Floors	
4-4 Attics	
4-5 Basements and Crawlspace	
4-6 Interior Doors	
4-7 Interior Trim	
4-8 Fireplaces 4-9 Stairs	

4-10 Handrails and Guardrails	
4-11 Closets	
SECTION 5: FOOD PREPARATION AND STORAGE	2
5-1 Storage	
5-2 Counters	
5-3 Stoves and Refrigerators	
SECTION 6: PLUMBING	2
6-1 Water Supply	
6-2 Sewage Systems	
6-3 Plumbing	
6-4 Water Heaters	
6-5 Hot and Cold Water	
6-6 Kitchen Sink	
6-7 Lavatory Sink	
6-8 Bathtubs and Showers	
6-9 Flush Water Closets	
6-10 Bathroom Accessories	
SECTION 7: HEATING AND AIR CONDITIONING	2
7-1 HVAC Systems	
7-2 Venting	
SECTION 8: VENTILATION	2
8-1 Dwellings	
8-2 Kitchen and Bathrooms	
8-3 Attics	
8-4 Crawlspace	
8-5 Basements	
8-6 Clothes Dryers	
SECTION 9: ELECTRICAL	2
9-1 General Condition	
9-2 Service	
9-3 Existing Systems	
SECTION 10: ENERGY CONSERVATION	2
10-1 Attics and Crawlspace	
10-2 Exterior Walls	
10-3 Openings	
10-4 Exterior Doors	
10-5 Windows	
10-6 Ductwork and pipes	
SECTION 11: OCCUPANCY	2
11-1 Occupancy	
SECTION 12: FIRE SAFETY	2
12-1 Exits	
12-2 Sleeping Rooms	
12-3 Smoke Detectors	
12-4 Hazardous Material Storage	
12-5 Fuel Burning Appliances	
SECTION 13: HAZARDOUS MATERIALS	2
13-1 Lead Based Paint	
13-2 Asbestos	
SECTION 14: SANITATION	2
14-1 Waste Disposal	
14-2 Condition of the Premises	
SECTION 15: PEST CONTROL	2
15-1 Insects, Vermin, Rodents	
15-2 Termites	
SECTION 16: ZONING.....	3

16-1 Zoning
Certificate of Compliance 3

DRAFT

Explanation of Terms:

Minimum Standards for Housing Rehabilitation:

An evolving compliance guide to help Grantee in assessing the scope of a potential rehabilitation project utilizing federal, state, or local funding assistance.

Overview:

A quick reference to basic design standards or level of expectations set forth in the overall standard. These basic design standards begin each individual compliance sections and state the intention of the complete section.

Compliance Minimums:

Individual bullet points within each section that point out specific example conditions that could be addressed or found in a typical rehabilitation project.

Recommendations (Asterisk):

These items are additional suggestions to be considered when formulating the total scope of work for Community Development funded works.

Historic Preservation—Section 106 Reviews:

This section is for homeowners, agencies, developers and grant recipients which use federal funds for rehabilitation of National Register Listed properties. There are many National Register District, which contain contributing properties, throughout the City of Evansville. In compliance with the National Historic Preservation Act of 1966 through the Section 106 Process it is necessary for all federally funded rehabilitation projects to comply with the standards and regulations provided by this federal act.

The National Park Service and the Secretary of the Interior provide a framework for rehabilitation entitled the Secretary of the Interior's Standards for Rehabilitation. The standards are meant to be used as guidance for federally funded projects which will affect the historic integrity of a National Register Property or District.

Secretary of the Interior's Standards for Rehabilitation: (<http://www.nps.gov/hps/tps/tax/rhb/index.htm>)

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.
7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

The standards are not prescriptive and can be used in consultation with the Evansville Historic Preservation Officer. Most Section 106 Reviews for federally funded programs can be done at the local level through a programmatic agreement with the state and federal government. This process needs to be started as soon as possible *prior to any* work commencing on the proposed property. The process is a consultation process and therefore is not the same for every property but rather case by case depending upon the historic nature of the property, composition of materials and physical appearance of the property itself.

Section 106 Reviews for Rehabilitation—Process

1. Contact the Evansville Historic Preservation Officer *prior to any permits, demolition or construction*.
2. Provide a detailed site plan, architectural rendering and/or construction specs as this will expedite the process.
3. Schedule a walk through with the Evansville Historic Preservation Officer and Community Development staff.
4. Be prepared to make adjustments to plans, materials and construction specs as required by the Secretary of the Interior's Standards for Rehabilitation.
5. Provide final plans to the Evansville Preservation Officer as soon as possible for a final approval and/or further consultation.

The Standards Overview provides a quick reference to many questions that may arise from the evaluation of compliance with these standards. Each overview section is addressed in the more detail within the subsequent Standards.

Section 1: Grounds

1-1 Frontage

Each lot on which a dwelling is located shall have frontage on a public street or alley.

1-2 Access

Every dwelling shall be accessible and capable of being maintained without unauthorized use of other private properties.

1-3 Exterior Paving

Paved driveways, walkways, steps, stoops, porches, and other paved areas shall allow unimpeded passage and be free from tripping hazards.

1-4 Drainage

There shall be positive surface water drainage away from all dwellings.

1-5 Landscaping

Landscaping shall not compromise the integrity the foundation, roof, or walls; nor shall the site vegetation create a hazard to health or use.

1-6 Fences

All fences shall be maintained in good repair.

1-7 Cisterns

Cisterns shall be structurally sound, and shall not constitute a safety or health hazard.

1-8 Retaining Walls

Retaining walls shall be structurally sound, in good repair, and shall not constitute a safety hazard.

Section 2: Accessory Buildings

2-1 Accessory Buildings

Accessory buildings shall be structurally sound and in good repair.

Section 3: Exterior of Dwelling Structure

3-1 Dwelling

Every dwelling shall be structurally sound.

3-2 Foundations

All concrete blocks, poured concrete, or brick foundations, and piers shall be in good repair.

3-3 Rodent Proofing

All openings in the exterior walls, foundations, basements, ground and first floors, and roofs shall be rodent proofed.

3-4 Walls

Exterior wall surfaces shall have no serious defects and shall be weathertight. Surfaces shall have no peeling, flaking, or loose paint.

3-5 Roofs

All roof structure and roofing materials shall be in good repair.

3-6 Chimneys

Chimneys shall be in good repair.

3-7 Gutters

The guttering system shall be in good repair.

3-8 Porches and Stairs

Porches, stoops, stairs, and steps shall be in good repair.

3-9 Handrails and Guardrails

Handrails and guardrails shall be provided where required by code.

3-10 Ramps

All ramps shall be constructed to meet ADA guidelines.

3-11 Windows

Window units shall be in good repair.

3-12 Doors

Doors units shall be in good repair.

Section 4: Interior of Dwelling Structure

4-1 Walls

Interior walls shall be sound and in good repair.

4-2 Ceilings

Ceilings shall be sound and in good repair

4-3 Floor

Floors shall be structurally sound and in good repair.

4-4 Attics

All structural and systems components in attics shall be in sound conditions and in good repair.

4-5 Basements and Crawlspaces

All structural and systems components in basements and crawl spaces shall be in sound conditions and in good repair.

4-6 Interior Doors

Interior door units shall be in good repair.

4-7 Interior Trim

All interior trim shall be in good repair.

4-8 Fireplaces

Fireplaces and components shall be in safe operating condition.

4-9 Stairs

Stairs and stairwells shall be in good repair.

4-10 Handrails and Guardrails

Handrails and guardrails shall be provided where necessary for safety.

4-11 Closets

Permanent closets shall be provided in all bedrooms.

Section 5: Food Preparation and Storage

5-1 Storage

Every dwelling unit shall have adequate and proper storage facilities for food and kitchen utensils.

5-2 Counters

Every dwelling unit shall contain a counter or table for food preparation.

5-3 Appliances

Every dwelling unit shall have a stove and a refrigerator in good operating condition.

Section 6: Plumbing

6-1 Water Supply

Every dwelling unit shall be served by an approved public or private water supply.

6-2 Sewage System

Every dwelling unit shall be served by an approved public or private sanitary sewage system.

6-3 Plumbing

The plumbing system shall be in good repair and corrected to meet code.

6-4 Water Heaters

Every dwelling unit shall have a hot water heater in good condition and sufficient capacity to serve present needs.

6-5 Hot and Cold Water

Hot and cold water shall be supplied to all fixtures except water closets, which may be cold water only.

6-6 Kitchen Sink

Every kitchen shall contain a kitchen sink in good repair.

6-7 Lavatory Sinks

Every dwelling unit shall contain a lavatory sink in good repair.

6-8 Bathtubs and Showers

Every dwelling unit shall contain a privacy area with a bathtub and/or shower unit in good repair.

6-9 Flush Water Closet Every dwelling unit shall contain a privacy area with a flush water closet in good repair.

6-10 Bathroom Accessories

Every bathroom shall be equipped with a towel rack and toilet paper holder. Every full bath shall have a medicine cabinet, with a mirror. A light fixture shall be install adjacent to the mirror.

Section 7: Heating and Air Conditioning

7-1 HVAC Systems

Heating, ventilation, and or air condition systems shall be in safe operating condition.

7-2 Venting

All non-electric heating units shall be vented.

Section 8: Ventilation

8-1 Dwellings

Every dwelling shall be properly ventilated.

8-2 Kitchens and Bathrooms

Kitchens and bathrooms shall have operable windows or exhaust hoods/fans.

8-3 Attics

Attic areas shall be properly vented or detailed as a 'conditioned attic'.

8-4 Crawlspace

Crawlspaces shall be properly vented or detailed as a 'conditioned crawlspace'.

8-5 Basements

Basement windows shall be in good repair.

8-6 Clothes Dryer

Clothes dryers shall be properly vented to the outside of the dwelling and the vent shall have a properly secured vent cap/louver.

Section 9: Electrical

9-1 General Condition

All areas of the dwelling unit shall have adequate artificial illumination to normal activities and the support the health and safety of the occupants. Sufficient electrical sources shall be present to permit the use of electrical appliances.

9-2 Service

Service and drops shall meet current electrical code requirements.

9-3 Existing Systems

Existing wiring and equipment shall be in proper operating condition.

Section 10: Energy Conservation

10-1 Attics and Crawlspaces

Attics and crawlspace areas shall be insulated.

10-2 Exterior Walls

Newly constructed exterior walls shall be insulated according to current code requirements.

10-3 Openings

All openings, cracks, and joints in the building envelope shall be sealed to prevent air and moisture infiltration.

10-4 Exterior Doors

Exterior doors shall be weather-stripped or otherwise made weather tight.

10-5 Windows

All single glazed windows will conserve energy if a storm unit is provided.

10-6 Ductwork and Pipes

Heating/cooling ductwork and water supply piping in unconditioned spaces shall be insulated.

Section 11: Occupancy

11-1 Occupancy

Every dwelling unit shall have adequate space for each occupant.

Section 12: Fire Safety

12-1 Exits

Every dwelling unit shall have proper exits to the exterior.

12-2 Sleeping Rooms

Every sleeping room shall have proper exits to the exterior.

12-3 Smoke Detectors

Every sleeping room shall have proper exits to the exterior.

12-4 Hazardous Material Storage

No highly flammable materials shall be stored in a dwelling and other materials shall be stored so as not to constitute a fire hazard.

12-5 Fuel Burning Appliances

All fuel burning appliances in garages or other attached structures must be installed according to current mechanical and electrical code.

Section 13: Hazardous Materials

13-1 Lead-Based Paint

Every dwelling unit shall be in compliance with current lead paint regulations and restrictions when the presence of lead based paint is found or suspected.

13-2 Asbestos

Every dwelling unit shall be in compliance with current asbestos regulations and restrictions when the presence of asbestos is found or suspected.

Section 14: Sanitation

14-1 Waste Disposal

Every dwelling unit shall have adequate facilities for the proper storage and disposal of garbage, trash, and organic wastes.

14-2 Condition of Premises

Every dwelling unit and premises shall be kept free of all organic waste, trash, debris, garbage, junk, and other unsafe and unsanitary conditions.

Section 15: Pest Control

15-1 Insects, Vermin, and Rodents

All structures and premises shall be free of insects, vermin, and rodent infestation.

15-2 Termites

All structures shall be termite free.

Section 16: Zoning

16-1 Zoning

All buildings shall be in compliance with all applicable zoning regulations. **Basic Design Standards**

The Basic Design Standards will begin to layout some the common conditions that have been subject to compliance rehabilitations in past Community Development projects. These standards are a complete list of all factors that could be found while assessing a project, but these standards begin to describe the level of code and HUD compliance that will necessary to obtain and utilize funding from the City of Evansville, Community Development Department. In all cases, the staff of CD, licensed design professionals, and local building officials will have the final say on compliance. These standards should be used as a reference guide when completing the enclosed Certificate of Compliance.

SECTION 1: GROUNDS

1-1 Frontage

Basic Design Standard:

Each lot on which a dwelling is located shall have frontage on a public street or alley.

See applicable building codes or zoning ordinances for complete compliance requirements.

1-2 Access

Basic Design Standard:

Every dwelling shall be accessible and capable of being maintained without unauthorized use of other private properties.

See applicable building codes or zoning ordinances for complete compliance requirements.

1-3 Exterior Paving

Basic Design Standard:

Paved driveways, walkways, steps, stoops, porches, and other paved areas shall allow unimpeded passage and be free from tripping hazards.

Compliance Minimums:

A. Crumbling concrete along the edges shall be corrected. Cracks or joints where there is a sudden change of one inch or more in height shall be corrected.

*It is recommended that minor degrees of the above problems as well as spalling be corrected.

B. Walkways adjacent to the dwelling shall at minimum be level and have positive drainage away from the foundation.

C. Stoops, porches, and steps shall be properly dimensioned.

D. Sidewalk and steps shall be free from encroachment by building parts, trees and shrubs.

See applicable building codes or zoning ordinances for complete compliance requirements.

1-4 Drainage

Basic Design Standard:

There shall be positive surface water drainage away from all dwellings.

Compliance Minimums:

A. The ground shall be sloped away from the foundation. B. In-ground drains shall be disconnected, capped off and the water directed to splash blocks whenever either or both of the following situations are found:

1. Evidence that an in-ground drain is leaking and causing the basement wall to be wet or to leak.
 2. Good surface drainage from the house in the vicinity of the in-ground drain in question.
- NOTE: This shall not be done if water will run across a sidewalk and create a hazard, and the in-ground drain is functional.
- C. Reconfiguration to provide 'in-ground' drains to daylight on the property is also acceptable.
- *It is recommended that the lot on which the dwelling is located have sufficient ground cover to prevent soil erosion.

See applicable building codes or zoning ordinances for complete compliance requirements.

1-5 Landscape

Basic Design Standard:

Landscaping shall not compromise the integrity the foundation, roof, or walls; nor shall the site vegetation create a hazard to health or use.

Compliance Minimums:

- A. Branches hanging over the roof and causing excessive wear.
 - B. Trees near the foundation causing a drainage and/or structural problem or potential problem.
 - C. Excessive brush and tree combinations (overgrown areas) causing possible health hazards.
 - D. Dead branches and/or trees which pose a hazard of falling and causing personal harm or property damage.
- *Trees shall be trimmed a minimum of five feet from the roof of the structure.

See applicable building codes or zoning ordinances for complete compliance requirements.

1-6 Fences

Basic Design Standard:

All fences shall be maintained in good repair.

Compliance Minimums:

- A. Fences not in good repair shall be repaired or removed.
 - B. Wood materials shall be protected against decay by use of a non-lead-based paint or other preservative material.
- NOTE: Decay- and insect-resistant woods such as cedar, redwood and pressure treated material shall be exempt from mandatory treatment.
- C. Fences shall not create a harborage for rodents.

See applicable building codes or zoning ordinances for complete compliance requirements.

1-7 Cisterns

Basic Design Standard:

Cisterns shall be structurally sound, and shall not constitute a safety or health hazard.

Compliance Minimums:

- A. Cisterns in use shall be structurally sound and properly capped with a heavy metal lid.
- B. Cisterns not being used shall be filled with non-organic material such as pea gravel, and appropriately covered to prevent access and promote safety.
- C. Cisterns under the building shall be filled in with proper material, such as pea gravel.
- D. All pipes shall be disconnected.

See applicable building codes or zoning ordinances for complete compliance requirements.

1-8 Retaining Walls

Basic Design Standard:

Retaining walls shall be structurally sound, in good repair, and shall not constitute a safety hazard.

Compliance Minimums:

- A. All missing or loose concrete blocks, bricks, or other building material, shall be properly reset.
- B. Retaining walls of masonry construction shall be free of loose mortar joints. All empty or cracked joints shall be tuck pointed to match existing mortar joints.
- C. Retaining walls shall be capped if appropriate.
- D. Appropriate weep drains shall be installed and kept open to prevent hydrostatic pressure buildup.
- E. New retaining walls of wood shall be constructed of decay resistant materials.

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 2: ACCESSORY BUILDINGS

2-1 Accessory Buildings

Basic Design Standard:

Accessory buildings shall be structurally sound and in good repair..

Compliance Minimums:

- A. Accessory buildings shall have a sound, non-leaking roof.
- B. Substandard electrical systems shall be corrected or service shall be disconnected to those structures.
- C. Broken window glass shall be replaced.
- D. The exterior of such structures shall be made weather resistant through the use of decay-resistant materials, non-lead-based paint or other preservatives.
- E. Flaking or peeling paint shall be corrected.
- F. Enclosed buildings shall be free from insects, vermin, and rodents.

*It is recommended that defects in structural and mechanical systems not mentioned above but covered in other sections of these standards be corrected. (Example: roof support system).

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 3: EXTERIOR OF DWELLING STRUCTURE

3-1 Dwelling

Basic Design Standard:

Every dwelling shall be structurally sound.

Compliance Minimums:

- A. The dwelling shall protect the occupants from the environment and no portion of the structural system shall pose any threat to their health or safety.

See applicable building codes or zoning ordinances for complete compliance requirements.

3-2 Foundations

Basic Design Standard:

All concrete blocks, poured concrete, or brick foundations, and piers shall be in good repair.

Compliance Minimums:

A. All concrete blocks, poured concrete, or brick foundations, piers, and pilings shall be structurally sound. All empty or cracked mortar joints shall be tuck-pointed to match the existing mortar joints. All 'through-wall' cracks shall be structurally stabilized.

See applicable building codes or zoning ordinances for complete compliance requirements.

3-3 Rodent Proofing

Basic Design Standard:

All openings in the exterior walls, foundations, basements, ground and first floors, and roofs shall be rodent proofed.

Compliance Minimums:

A. All openings one-half inch diameter or greater in the exterior walls, foundations, basements, ground and first floors, and roofs shall be rodent-proofed in an approved manner if they are within 48 inches of the existing exterior ground level immediately below such openings, or if they may be reached by rodents from the ground by climbing unguarded pipes, wires, cornices, stairs, roofs, and other items such as trees or vines or by burrowing.

See applicable building codes or zoning ordinances for complete compliance requirements.

3-4 Walls

Basic Design Standard:

Exterior wall surfaces shall have no serious defects and shall be weathertight. Surfaces shall have no peeling, flaking, or loose paint.

Compliance Minimums:

A. The wall structure and exterior surface shall have no serious defects such as buckling, sagging, cracked or deteriorated siding, loose siding, holes, or other serious damage.

B. The exterior walls shall be weather tight in a manner that prevents water infiltration and heat loss in winter as much as possible.

C. Surfaces shall be protected against the elements by durable finishes.

D. Joints and cracks shall be properly caulked.

See applicable building codes or zoning ordinances for complete compliance requirements.

3-5 Roofs

Basic Design Standard:

All roof structure and roofing materials shall be in good repair.

Compliance Minimums:

A. The roof shall be structurally sound, and the roof-framing members shall be free from breakage and rot. Excessive sagging shall be corrected by replacement or installation of an applicable structural support system. B. The roof sheathing shall be solid and free from excessive sagging or buckling, and all damaged, rotten, or missing sheathing shall be replaced.

C. A leaking or well-worn roof covering shall be entirely replaced. Additional composition shingle roof applications shall comply with the current building code.

Roofs and valley shall be installed according to the standards set by the National Roofing Contractors Association. Exposed roll roofing valleys shall not be allowed.

D. When a new roof is installed, corrosion resistant metal flashing shall be used whenever the roof abuts a wall, over vents, around other extensions through the roof, and around masonry chimneys.

E. Roll roofing shall not be installed to any roof.

F. Three-in-one tab asphalt or fiberglass shingles shall not be installed on roofs with less than three-in-twelve (3 1/2:12) pitch during rehabilitation. Built-up, modified bitumen, EPDM, or other approved systems shall be used when the pitch is less than 3 1/2:12.

G. The components of the gable ends, overhangs, and soffits shall be free from deterioration, rot, and sag. The surfaces shall not have peeling, flaking, or loose paint and shall be protected against the elements. Sagging fly rafters shall be replaced and/or re-supported with bracing. Where applicable, rotted wood components shall be replaced before aluminum wrapping is installed. Soffits shall be fully ventilated or as detailed by the ventilation and insulation strategy.

See applicable building codes or zoning ordinances for complete compliance requirements.

3-6 Chimney's

Basic Design Standard:

Chimneys shall be in good repair.

Compliance Minimums:

A. Chimneys shall be of such height to produce adequate draft. Chimneys shall be at least two feet higher than any portion of the roof or of the building which is within ten feet of the top of the chimney.

B. All empty or cracked mortar joints shall be tuck-pointed in an acceptable manner, and chimneys shall have a mortar or acceptable cap.

C. Solid fuel-burning chimneys (for burning of wood or coal) shall be provided with spark arrestors (screens).

D. All chimneys that are in use shall have an appropriate flue liner and chimney cover. No unlined chimney shall be used.

See applicable building codes or zoning ordinances for complete compliance requirements.

3-7 Gutters

Basic Design Standard:

The guttering system shall be in good repair.

Compliance Minimums:

A. Whenever gutters are installed on fascia boards, those boards shall be painted or metal or vinyl clad. When eaves or fascia are wrapped, the wrap shall extend up under the drip edge.

B. The guttering system shall be in good repair and protected from corrosion. Gutters shall be kept free of debris, be securely attached, have positive drainage to the downspouts, and be properly connected to the downspouts. The drainage requirements in Standard 1-4 (Grounds: Drainage) shall also be followed.

C. Downspouts shall be extended to properly drain away from the building and splash blocks shall be installed. (See Section 1-4 Grounds, Drainage)

D. Downspouts shall be disconnected from sanitary sewers or other 'unknown' drains into the ground.

E. In-ground drainage piping shall be continued to 'daylight' shall be permitted where the discharge point is fully located on the subject property and does not introduce water onto neighboring properties.

See applicable building codes or zoning ordinances for complete compliance requirements.

3-8 Porches and Stairs

Basic Design Standard:

Porches, stoops, stairs, and steps shall be in good repair.

Compliance Minimums:

- A. The determination of the condition of roofs and supporting structures, soffits, trim, gutters, brick, and other types of walls, foundations, and other items not specifically covered in this standard shall be regulated by the appropriate areas of this Section.
- B. The porch ceiling coverings shall be secure and not sagging. Ceiling coverings shall be free from deterioration, peeling and flaking paint, and shall be protected by paint or other appropriate finish.
- C. The porch floor and steps shall be in a condition which does not pose a danger of tripping or falling.
 - 1. Rotted, deteriorated, missing, incorrectly sized or otherwise defective wooden decking, steps, or supporting structure thereof shall be repaired or replaced. All wood shall be protected against the elements. Cedar, redwood, and pressure treated wood do not require painting or other preservative treatment.
 - 2. Crumbling steps, collapsing, or severely cracked concrete stoops and slabs shall be repaired or replaced. Sudden rises of over one inch shall be corrected.
 - a. Newly installed elevated slabs shall have a pea gravel or compacted stone base.
- b. All replacement steps shall have uniform treads and risers. The riser height shall not be greater than eight and one-quarter inches. The tread depth shall not be less than nine inches.
- c. A minimum head height of 6'-8" shall be maintained above all nosing's.
- D. Columns and railing systems shall be in good repair.

See applicable building codes or zoning ordinances for complete compliance requirements.

3-9 Handrails and Guardrails

Basic Design Standard:

Handrails and guardrails shall be provided where required by code.

Compliance Minimums:

- A. Structurally sound handrails, having minimum and maximum heights of 30 3/4 inches and 38 inches, respectively, measured vertically from the nosing of the treads, shall be provided on at least one side of any staircase having four or more risers.
- B. Porches, balconies, or raised floor surfaces, located more than 30 inches above the floor or grade below, shall have guardrails not less than 36 inches in height. Required guardrails shall have intermediate rails or ornamental closures which will not allow passage of an object four or more inches in diameter.
- C. Handgrip portion of handrail shall be between 1 1/4" and 2 3/8" in cross-section dimension. Handgrip shall not project into the stairwell more than 4 1/2".

3-10 Ramps

Basic Design Standard:

All ramps shall be constructed to meet ADA guidelines.

Compliance Minimums:

- A. All ramps shall have no more than a 12" in 8' slope. A slope of 12" in 12' is preferred.
 - B. All ramps shall have hand rails, 36"x36" landings at top and bottom, at change of direction, and at doors.
- See applicable building codes or zoning ordinances for complete compliance requirements.

3-11 Windows

Basic Design Standard:

Window units shall be in good repair.

Compliance Minimums:

- A. Any rotted or deteriorated components of window units that compromise performance shall be repaired or replaced. All broken sash cords shall be replaced or an alternate means of sash control installed, and all units shall have properly operating hardware where the window is required as a means of egress. The upper unit of double hung windows may be fixed.
- B. Broken or cracked glass shall be replaced.
- C. Cracked, deteriorated, or missing glazing compound shall be replaced and painted.
- D. Window units shall be sealed as required to reduce air infiltration.
- E. Window units shall not have peeling or flaking paint. Wood and steel components shall be protected against the weather.
- F. No windows shall be permitted in any common wall between an attached garage and a dwelling unit.

See applicable building codes or zoning ordinances for complete compliance requirements.

3-12 Doors

Basic Design Standard:

Doors units shall be in good repair.

Compliance Minimums:

- A. Door units shall be properly installed, operate easily, and have operating latching/locking hardware.
 - B. Entry doors shall have deadbolt locks with thumb latches on the interior.
 - C. Entry door units shall be weather-stripped to prevent air infiltration.
 - D. Lights, (glass) shall be free of cracks and breaks and shall be properly glazed.
 - E. All surfaces of doors shall be protected against the elements with an appropriate finish.
 - F. Door units shall be free of peeling and flaking finish.
 - G. Openings between the garage and the dwelling unit shall be equipped with solid wood doors or the equivalent, not less than one and three-quarters inches in thickness. Doors between the garage and the dwelling unit shall not have glass and a 20 minute rating.
 - H. Replacement entry door units shall be solid wood doors or the equivalent, not less than one and three-quarters inches in thickness.
- *Recommended insulated steel doors with magnetic type weather seal.

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 4: INTERIOR OF DWELLING STRUCTURE

4-1 Walls

Basic Design Standard:

Interior walls shall be sound and in good repair.

Compliance Minimums:

- A. Plaster-lath and gypsum board walls shall be securely fastened and free from serious defects, including severe bulging or leaning, holes, loose materials, and cracks greater than one quarter inch in width.
- B. All cracks and holes shall be patched.
- C. Only approved water resistant gypsum board and finishes shall be used in bathroom and kitchen areas.

- D. Shower compartment walls shall be furnished with a smooth, hard, non-absorbent surface to a height not less than six feet above the floor of the shower. All joints shall be properly caulked.
- E. Peeling and flaking paint and loose wallpaper shall be corrected. Any wall repairs shall be properly prepared and painted.
- F. Bathrooms shall be free of mold. If mold is detected, proper remediation will be required.

*If some walls in a given area require painting, it is recommended that the remaining walls in that area also be painted.

See applicable building codes or zoning ordinances for complete compliance requirements.

4-2 Ceilings

Basic Design Standard:

Ceilings shall be sound and in good repair

Compliance Minimums:

- A. Plaster-lath and gypsum board ceilings shall be securely fastened to the building structure. The ceilings shall not have any defects, including bulging, holes, loose plaster, or cracks greater than one quarter inch in width.
- B. All cracks and holes shall be patched.
- C. Peelings or flaking paint and loose wallpaper shall be scraped or removed.
- D. All repaired or replaced ceilings shall be smooth painted, textured gypsum board or an approved equal.
- E. Acoustical tile and suspended ceilings shall be in good repair. These ceilings shall be properly installed to accommodate air diffusers or returns and properly suspended light fixtures if necessary. Acoustical or suspended tile ceilings shall not be used in bathrooms. When used in kitchens they shall be plastic coated for food service use.
- F. Old acoustic sprayed ceilings shall be checked for asbestos. If asbestos is found it should be removed by a licensed asbestos abatement contractor.

See applicable building codes or zoning ordinances for complete compliance requirements.

4-3 Floors

Basic Design Standard:

Floors shall be structurally sound and in good repair.

Compliance Minimums:

- A. No floor shall have any serious defects, including bulging, buckling, holes, and gaps at the walls or noticeable movement under walking stress.
- B. When floor areas are found to be weak, sagging or significantly out of level, structural corrective actions shall be taken to stabilize, correct the problem.
- C. Unfinished wood floors shall be finished with paint or an approved finish.
- D. Exposed subfloor shall be covered with approved floor covering.
- E. Every water closet, bathroom and kitchen floor surface shall be constructed so as to be reasonably impervious to water.
 - 1. Where practical, repairs must be made to correct the condition.
 - 2. If structural subfloor replacement is necessary, only suitable structural subfloor products may be utilized.
 - 3. Vinyl floor underlayment shall be in accordance with the vinyl flooring manufacturer's recommendations. Special care shall be given to insure proper nailing of the underlayment.
 - 4. When a new floor covering is installed in the kitchen, it shall extend under moveable appliances, including stoves and refrigerators.
 - 5. When a new floor covering is installed in the bathroom, the water closet shall be removed. Both the plywood underlayment and the floor covering shall extend under the water closet; a new wax ring shall be installed under the water closet, and the water closet shall be reinstalled.

6. No carpeting, shall be considered impervious to water.

See applicable building codes or zoning ordinances for complete compliance requirements.

4-4 Attics

Basic Design Standard:

All structural and systems components in attics shall be in sound conditions and in good repair.

Compliance Minimums:

- A. Roof components including sheathing, rafter system and any bracing system shall be in good repair.
- B. Chimney bricks and mortar shall be in good repair.
- C. Any parts of the mechanical systems, plumbing vents, heat runs, and electrical wiring shall be in good repair and comply with the respective sections of current building code.
- D. There shall be adequate ventilation, unless a 'conditioned attic' space is detailed and provided, and insulation as stipulated in the respective sections of these Standards. Ventilation openings shall be properly screened to prevent insect, bird, and animal entry.
- E. Other components such as joists, windows, and walls shall be in sound condition and good repair.
- F. Access to the attic areas shall be placed and sized to allow for regular inspection. Access door shall fit solidly in place without air leaks.
- G. Conditioned attic spaces must be insulated on the underside of the roof deck and all exterior wall surfaces with closed cell foam to eliminate air infiltration. No venting of a conditioned attic is permitted.

See applicable building codes or zoning ordinances for complete compliance requirements.

4-5 Basements and Crawlspaces

Basic Design Standard:

All structural and systems components in basements and crawl spaces shall be in sound conditions and in good repair.

Compliance Minimums:

- A. All structural wood members shall be repaired or replaced when found to be cracked, broken, rotted, or structurally weakened by wood destroying pests or other causes.
- B. Basement walls shall be structurally sound and free of bowing, deteriorated mortar joints, and/or dampness, if reasonably possible. *It is recommended that concrete or concrete block walls be constructed where dirt walls currently exist.
- C. Chimney bricks and mortar shall be in good repair.
- D. Concrete floors shall be in good repair. Floor drains shall drain freely. When a concrete floor is poured, a floor drain connected to a discharge system with a backwater valve shall be required. In existing drains, a plug shall be available.
- E. Crawl spaces shall have closable vents with screens in good repair unless a 'conditioned crawlspace' is detailed and provided. See below #K. *It is recommended that the ground in a crawl area be covered with a six-mil polyethylene vapor barrier.
- F. Access to crawl space shall be placed and sized to allow for regular inspection. An interior access door shall fit solidly without air leaks.
- G. Where evidence of rodents is found in areas of question shall be treated. Openings which would allow animal or rodent entry shall be closed.
- H. Electrical, heating, and plumbing systems and their components shall be in safe condition and comply with their respective sections of these Standards. I. Staircases, handrails, windows, and other structural components shall be in good repair and comply with their respective sections of these Standards.

J. All debris shall be removed. Unused fuel tanks, furnaces, or similar shall be removed. Mold and mildew shall be treated.

K. Conditioned crawlspaces must be properly insulated and sealed to prevent air infiltration and must have a 2" concrete slurry slab floor or equal.

See applicable building codes or zoning ordinances for complete compliance requirements.

4-6 Interior Doors

Basic Design Standard:

Interior door units shall be in good repair.

Compliance Minimums:

A. There shall be doors at the entrance to the following areas: water closet compartments, bathrooms, shower rooms, basements, bedrooms, and attic areas where there is a staircase.

B. Doors shall operate freely and be properly installed.

C. Doors which latch or lock shall have proper operating hardware.

D. Doors shall be free of flaking or peeling paint. All surfaces of the doors shall have a finish coating.

See applicable building codes or zoning ordinances for complete compliance requirements.

4-7 Interior Trim

Basic Design Standard:

All interior trim shall be in good repair.

Compliance Minimums:

A. All trim shall be free of flaking or peeling paint. All trim shall have a finish coating.

B. Missing trim shall be replaced to eliminate gaps.

See applicable building codes or zoning ordinances for complete compliance requirements.

4-8 Fireplaces

Basic Design Standard:

Fireplaces and components shall be in safe operating condition

Compliance Minimums:

A. Fireplace components including firebricks, fire clay, hearth, and dampers shall be in good repair and operational.

B. All fireplaces shall have one of the following: an in-chimney damper, an on top of chimney damper, or a screen/glass door unit with an adjustable damper.

C. No appliance shall be vented into a fireplace or into a chimney flue serving a fireplace.

See applicable building codes or zoning ordinances for complete compliance requirements.

4-9 Stairs

Stairs and stairwells shall be in good repair.

Compliance Minimums: The condition of stairs shall be such as not to pose a danger of tripping or falling.

- A. All components shall be capable of supporting the loads which normal use may cause to be placed thereon and shall be kept in sound condition and good repair.
- B. A replacement staircase shall have uniform treads and risers. The riser height shall not be greater than eight and one-quarter inches. The tread depth shall not be less than nine inches. Other dimensions of International Residential Code CABO One and Two Family Dwelling Code shall apply.

See applicable building codes or zoning ordinances for complete compliance requirements.

4-10 Handrails and Guardrails

Basic Design Standard:

Handrails and guardrails shall be provided where necessary for safety.

Compliance Minimums:

- A. Structurally sound handrails, having minimum and maximum heights of 30 and 34 34 and 38 inches, respectively, measured vertically from the nose of the treads, shall be provided on at least one side of any stairway having four or more risers.
- B. Porches, balconies, or raised floor surfaces, located more than 30 inches above the floor or grade immediately below, shall have guardrails not less than 36 inches in height. Required guardrails shall have intermediate rails or ornamental closures which will not allow passage of an object four or more inches in diameter.
- C. Handgrip portion of handrail shall be between 1 ¼" and 2 ¾" in cross-section dimension. Handgrip shall not project into the stairwell more than 4"

See applicable building codes or zoning ordinances for complete compliance requirements.

4-11 Closets

Basic Design Standard:

Permanent closets shall be provided in all bedrooms.

Compliance Minimums:

Each bedroom shall have permanent closet with doors for storage with accessible clear hanging space equipped with rod and shelf which meets or exceeds the following:

- A. Double occupancy bedrooms 2' - 0" deep by 5' - 0" wide properly finished.
- B. Single occupancy bedrooms 2' - 0" deep by 3' - 0" wide properly finished.

Exceptions may be allowed with prior approval. Where existing built-in bedroom closets exist, the existing closets do not need to be reconstructed, but each situation shall be reviewed with Community Development

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 5: FOOD PREPARATION AND STORAGE

5-1 Storage

Basic Design Standard:

Every dwelling unit shall have adequate and proper storage facilities for food and kitchen utensils.

Compliance Minimums: A. Every dwelling unit shall have cabinets and/or shelves for the storage of eating, drinking, and cooking equipment, and of utensils, and of food which does not under ordinary summer conditions require refrigeration for safekeeping.

- B. Cabinets shall be of sound construction, have closable doors, and shall be capable of supporting 30 pounds per square foot. Open shelving shall be acceptable for storage of non-food items.
- C. Floor/wall openings on cabinet interiors shall be sealed. Cabinets for food storage shall be sealed from access of rodents.
- D. Drawers shall be freely operable with solid bottoms.
- E. Replacement cabinets shall conform to, or exceed FHA minimum standards.

See applicable building codes or zoning ordinances for complete compliance requirements.

5-2 Counters

Basic Design Standard:

Every dwelling unit shall contain a counter or table for food preparation.

Compliance Minimums:

A. Counters or tables for food preparation shall be of sound construction and furnished with surfaces which are easily cleaned, free of unsealed cracks, and which will not impart any toxic or harmful effect to food.

See applicable building codes or zoning ordinances for complete compliance requirements.

5-3 Stoves and Refrigerators

Basic Design Standard:

Every dwelling unit shall have a stove and a refrigerator in good operating condition.

Compliance Minimums:

A. Every dwelling unit shall: contain a stove, capable of cooking food.

B. Every dwelling unit shall contain a refrigerator, or similar device, capable of storing food at temperatures of less than 45 degrees F. but more than 32 degrees F. under ordinary summer conditions.

C. All appliances shall be properly installed with all necessary connections for safe, sanitary, and efficient operation and shall be clean and have all parts necessary for efficient operation.

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 6: PLUMBING

6-1 Water Supply

Basic Design Standard:

Every dwelling unit shall be served by an approved public or private water supply.

Compliance Minimums:

A. Any private water supply shall be free from contamination and shall be approved by the Health Department of Vanderburgh County.

B. Any well shall be covered by a pit-less well adapter.

See applicable building codes or zoning ordinances for complete compliance requirements.

6-2 Sewage Systems

Basic Design Standard:

Every dwelling unit shall be served by an approved public or private sanitary sewage system.

Compliance Minimums:

- A. Where public sewer facilities are not available a private sewage disposal system shall be required.
- B. The system shall be of a sanitary type of construction and shall be approved by the Health Department of Vanderburgh County.

See applicable building codes or zoning ordinances for complete compliance requirements.

6-3 Plumbing

Basic Design Standard:

The plumbing system shall be in good repair and corrected to meet code.

Note: All work is to be completed in accordance with the Indiana Plumbing Code by a locally licensed plumber and with all proper permits.

Compliance Minimums:

- A. All portions of the plumbing system shall be inspected.
- B. The supply, waste, and venting systems shall be free from leaks, safely vented, and draining freely. Visibly deteriorated parts of the system shall be corrected.
- C. Any kitchen sink, lavatory sink, bathtub, and/or shower or flush water closet shall be properly connected to an approved water supply system and shall be connected to an approved sewer system.
- D. There shall be a properly operating main shut-off valve on the house side of the meter; meters and main shut-off valves located in meter pits shall be properly insulated. Replacement sill cocks shall be freeze proof and have a shut-off valve. All plumbing fixtures shall have a shut-off valve located near the fixture.
- E. Dielectric couplings shall be used when two metal pipes of different materials are joined.
- F. When drains operate slowly, all drain lines shall be cleaned, or if necessary, replaced.
- G. Lead pipes shall be removed and replaced with approved materials.
- H. All pipes in unheated spaces shall be insulated with ½ inch "Armaflex" type insulation or similar.
- I. Sump pumps shall drain to the exterior or into storm drains and not drain into sanitary lines.

See applicable building codes or zoning ordinances for complete compliance requirements.

6-4 Water Heaters

Basic Design Standard:

Every dwelling unit shall have a hot water heater in good condition and sufficient capacity to serve present needs.

Compliance Minimums:

- A. The hot water heater shall be capable of supplying water at not less than 120 degrees F. at each hot water outlet.
- B. Gas water heaters shall be properly vented, and the venting system shall be in good repair.
- C. A replacement water heater must have a new temperature and pressure (TNP) valve installed on it.
- D. A rigid relief valve discharge pipe approved for water distribution with a temperature rating of 210 degrees F. shall be run to within six inches of the floor. The pipe may be metallic (copper) or CPVC properly installed. The pipe end may not be threaded.
- E. No replacement gas water heaters may be installed in bathrooms, bedrooms, or occupied rooms normally kept closed without providing adequate combustion air.
- F. When gas appliances are used, a carbon monoxide detector shall be installed.

See applicable building codes or zoning ordinances for complete compliance requirements.

6-5 Hot and Cold Water

Basic Design Standard:

Hot and cold water shall be supplied to all fixtures except water closets, which may be cold water only.

6-6 Kitchen Sink

Basic Design Standard:

Every kitchen shall contain a kitchen sink in good repair.

Compliance Minimums:

A. Any rusted sink shall be replaced or refinished.

*It is recommended that chipped or badly worn enamel be a basis for refinishing or replacing the sink.

See applicable building codes or zoning ordinances for complete compliance requirements.

6-7 Lavatory Sink

Basic Design Standard:

Every dwelling unit shall contain a lavatory sink in good repair.

Compliance Minimums:

A. The lavatory sink may be located in the same room as the flush water closet, or, if located in another room, it shall be in close proximity to the water closet compartment.

B. Water inlets for lavatory sinks shall be located above the overflow rim of these fixtures in replacement units.

C. A rusted lavatory sink shall be replaced or refinished.

D. Lavatories shall be securely fastened to prevent movement.

E. If vanity cabinet is issued. It shall be securely fastened to wall and floor.

F. Floor and wall openings around piping shall be sealed.

See applicable building codes or zoning ordinances for complete compliance requirements.

6-8 Bathtubs and Showers

Basic Design Standard:

Every dwelling unit shall contain a privacy area with a bathtub and/or shower unit in good repair.

Compliance Minimums:

A. Water inlets for bathtubs shall be located a minimum of one inch above the maximum water level of these fixtures in replacement units.

B. A rusted bathtub and/or shower unit shall be replaced or refinished.

*It is recommended that chipped or badly worn enamel be a basis for refinishing or replacing a bathtub.

C. Newly installed shower faucets shall be pressure-balanced, anti-scald units with adjustable temperature control set for not more than 110 degrees F.

See applicable building codes or zoning ordinances for complete compliance requirements.

6-9 Flush Water Closets

Basic Design Standard:

Every dwelling unit shall contain a privacy area with a flush water closet (toilet) in good repair.

Compliance Minimums:

A. Each unit shall be securely fastened. Loose units or evidence of leaking around the toilet shall require removing the unit, verifying integrity of flange, seal, and bolts, and reinstallation according to manufacturer's recommendations, using new seal.

See applicable building codes or zoning ordinances for complete compliance requirements.

6-10 Bathroom Accessories

Basic Design Standard:

Every bathroom shall be equipped with a towel rack and toilet paper holder. Every full bath shall have a medicine cabinet, with a mirror. A light fixture shall be install adjacent to the mirror.

Compliance Minimums:

A. When a vanity cabinet is used, it shall be securely fastened to wall and floor.

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 7: HEATING AND AIR CONDITIONING

7-1 HVAC Systems

Basic Design Standard:

Heating, ventilation, and or air condition systems shall be in safe operating condition.

Compliance Minimums:

A. Every dwelling shall have an effective heating system which is properly installed, maintained in safe and good working condition and capable of safely and adequately heating all habitable rooms, bathrooms, and water closet compartments in each dwelling unit therein to a temperature of at least 70 degrees F. at a distance 36 inches above floor level with an outside temperature of -15 degrees F. Wood and coal burning heating system shall not be allowed.

B. Furnaces shall be located in a closed off area with proper clearances and ventilation in accordance with the manufacturer's requirements and the code.

C. No new furnace shall be installed under a stairway except an electric warm air furnace.

D. No new furnace shall be installed in a bedroom or bathroom or in a closet or any small space with access only through a bedroom or bathroom, except sealed combustion system furnaces, enclosed furnaces and electric warm air furnaces. Combustion ventilation air shall be provided to this enclosure in accordance with manufacturer's requirements and the code.

E. There shall be easy access to the heating, ventilating, and air conditioning (HVAC) system for purposes of maintenance and repair.

F. Ductwork

1. When a heating system is changed from gravity fed to a forced air system, the ductwork shall be altered or replaced in such a manner that the hot air outlets and registers are located near the outside walls. Alternate plans for heat distribution may be considered and will require prior approval.

2. Ductwork shall be sheet metal. All joints shall be secured with mechanical fasteners and mastic. Duct tape shall not only be used that complies with UL 181A regulations.

3. Ductwork in unheated spaces shall be insulated. (See Section 10-7 Insulation, Ductwork and Pipes) G. Vent pipes shall be free from visible rust, be secured with sheet metal screws, and have airtight connections at sections and the flue. The chimney flue shall be in good repair and safe operating condition, including the clean out and be properly lined for higher efficiency furnaces.

H. If more than one appliance is vented into the same flue (with the exception of a water heater and a furnace), the written approval of the Building Commissioner must be obtained for the continuation of the condition.

I. Thermostats shall be replaced when found to be defective or when the heating unit is replaced.

*Set back thermostats are recommended when thermostats are replaced.

J. Humidifiers

*Humidifiers may be installed as recommended improvements.

K. Any central air conditioning installed shall be capable of maintaining a temperature of 78 degrees F. in all habitable rooms, bathrooms, and water closet compartments at a distance of 36 inches above floor level with an outside temperature of 90 degrees F.

L. Replacement heating systems, burners and air conditioning systems shall be of high efficiency design:

(a) Replacement gas furnaces shall have energy efficiency rating of 80% or higher.

(b) Replacement central air conditioning units shall have a Seasonal Energy Efficiency Rating (SEER) of 12 or greater.

M. When gas appliances are used, a carbon monoxide detector shall be installed.

Note: All work is to be completed in accordance with the Indiana Mechanical Code by a locally licensed mechanical contractor and with all proper permits.

See applicable building codes or zoning ordinances for complete compliance requirements.

7-2 Venting

Basic Design Standard:

All non-electric heating units shall be vented.

Compliance Minimums:

A. No owner or occupant shall install, operate, or use a heating device, including a hot water heating unit or solid fuel burning appliance which employs the combustion of carbonaceous fuel, if it is not vented to the outside of the structure in an approved manner and is not supplied with sufficient air to support continuously the combustion of fuel.

B. All heating devices shall be constructed, installed, and operated in accordance with all applicable codes and manufacturer's instructions. Supply of combustion air shall be adequate to offset effect of exhaust fans, clothes dryers, etc. without creating negative pressures.

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 8: VENTILATION

8-1 Dwellings

Basic Design Standard:

Every dwelling shall be properly ventilated.

Compliance Minimums:

A. The dwelling unit shall be free from dangerous levels of air pollution from carbon monoxide, sewer gas, fuel gas, dust, and other harmful pollutants.

B. The area composed of habitable rooms shall be provided with an aggregate glass area of not less than eight percent of the combined floor area of such rooms. The glass area need not be proportionately distributed throughout the space, so long as the other glass provisions of these Standards are met. Approximately one-half of the required area of glass shall be openable.

C. There shall be a minimum of one properly operating openable window or exterior door in all habitable rooms, except as noted below. These openings shall have screens in good repair to prevent the entry of insects.

See applicable building codes or zoning ordinances for complete compliance requirements.

8-2 Kitchen and Bathrooms

Basic Design Standard:

Kitchens and bathrooms shall have operable windows or exhaust hoods/fans.

Compliance Minimums:

A. Glass areas are not required kitchens which have adequate mechanical ventilation and are open to adjoining habitable rooms, provided the combined area is lighted and ventilated as required.

*It is recommended that kitchen ranges have properly vented range hoods.

B. The glass areas may be omitted in bathrooms where an approved mechanical ventilation system is provided which is capable of producing .35 air changes per hour, and where adequate artificial light is provided.

C. Exhaust fans shall not remove air so as to cause negative air pressure at source areas for combustion air at fuel-burning appliances.

See applicable building codes or zoning ordinances for complete compliance requirements.

8-3 Attics

Basic Design Standard:

Attic areas shall be properly vented or detailed as a 'conditioned attic'.

Compliance Minimums:

A. Attic areas shall have vents, which shall be covered with screens to prevent the entry of insects.

*It is recommended that the vent area to floor area ratio be 1/150. When a combination roof/soffit system of vents is used the ratio decreases to 1/300. Further decrease in the ratio is possible through the use of power ventilators.

B. Condition attic spaces must be insulated on the underside of the roof deck and all exterior wall surfaces with closed cell foam to eliminate air infiltration. No venting of a conditioned attic is permitted.

See applicable building codes or zoning ordinances for complete compliance requirements.

8-4 Crawlspace

Basic Design Standard:

Crawlspace shall be properly vented or detailed as a 'conditioned crawlspace'.

Compliance Minimums:

A. Crawl spaces shall have closable vents protected by screens.

*It is recommended that the vent area to floor area ratio be 1/150.

B. Conditioned crawlspaces must be properly insulated and sealed to prevent air infiltration and must have a 2" concrete slurry slab floor or equal.

See applicable building codes or zoning ordinances for complete compliance requirements.

8-5 Basements

Basic Design Standard: Basement windows shall be in good repair.

Compliance Minimums:

A. Basement windows used for ventilation and daylight shall be in proper operating condition and protected by screens to prevent insect and rodent entry. Basement windows shall not allow water infiltration.

See applicable building codes or zoning ordinances for complete compliance requirements.

8-6 Clothes Dryers

Basic Design Standard:

Clothes dryers shall be properly vented to the outside of the dwelling and the vent shall have a properly secured vent cap/louver.

Compliance Minimums:

A. Flexible plastic vent pipe shall not be used for any purpose other than to connect the dryer to an immediately adjacent rigid vent pipe. Flexible plastic pipe shall not extend more than six feet. Rigid vent pipe shall be used for runs longer than six feet and in concealed areas.

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 9: ELECTRICAL

9-1 General Condition

Basic Design Standard:

All areas of the dwelling unit shall have adequate artificial illumination to normal activities and the support the health and safety of the occupants. Sufficient electrical sources shall be present to permit the use of electrical appliances.

Note: All work is to be completed in accordance with the Indiana Electrical Code by a locally licensed electrician and with all proper permits.

9-2 Service

Basic Design Standard:

Service and drops shall meet current electrical code requirements.

Compliance Minimums:

A. Newly installed services shall meet the specifications of the Indiana Electrical Rules. Existing services shall be upgraded to meet NEC.

B. Service to an existing dwelling unit shall be a minimum of 100-ampere with breakers and three wire capacities. Services shall be properly covered.

C. Upgrading existing services shall require total rewire so that entire system meets

See applicable building codes or zoning ordinances for complete compliance requirements.

9-3 Existing Systems

Basic Design Standard:

Existing wiring and equipment shall be in proper operating condition.

Compliance Minimums:

- A. Porcelain fixtures, with or without pull chains, shall only be allowed in garages, basements, unimproved attic areas, and utility areas with 18 inches clearance from the nearest combustible material. Exposed porcelain fixtures are not acceptable in closets.
- B. No fixture or socket may hang from a base by unsupported wiring.
- C. All replacement fixtures shall be on approved boxes.
- D. All broken switches, receptacles, fixtures and cover plates shall be replaced.
- E. Electrical equipment shall be installed in a neat and workmanlike manner as stated in the Indiana Electric Code.
- F. Any occupant of a dwelling shall have immediate access to the electrical service controlling the electrical system in his unit.
- G. All 230-volt appliances or equipment except baseboard heating units shall be on separate circuits. Baseboard heating units shall be installed to manufacturer's specifications.
- H. All receptacles and switches within 6 feet of a water source, including but not limited to sinks, tubs/showers, washing machine hook ups, sump pumps, shall be on a GFI circuit. Receptacles may be individual GFI receptacles properly installed.

SECTION 10: ENERGY CONSERVATION

10.1 Attics and Crawlspace

Basic Design Standard:

Attic and crawlspace areas shall be insulated.

Compliance Minimums:

A. Attic areas shall be insulated to at least R 38 with a prior approved insulating material:

1. All insulation products must comply with current flame spread and smoke generation requirements as specified by the current building code.
 2. Junction boxes shall be protected from direct contact with insulation.
 3. No insulation shall be installed above or within two inches of the sides of recessed light fixtures unless labeled for such insulation condition or if an insulation housing is used in conjunction.
 4. Both exhaust fan ductwork and fan box shall be covered with insulation. Fan unit must be label labeled for such insulation condition or if an insulation housing is used in conjunction.
 5. Soffit vents shall be protected from being covered by blown-in insulation.
 6. Any occupied attic area rooms shall have at least the walls between the room and attic areas as well as flat ceiling areas insulated. Wall insulation shall be at least R-19 and flat ceilings R-38.
 7. Wall cavities which are open into attic space shall be closed to ensure reasonable a fire and thermal stop between the house and the attic space.
 8. An alternative insulation method for attic would consist of applying closed cell foam to the underside of the roof decking and any sidewall area of the attic at a thickness equivalent to the applicable code requirements. This method provides a 'conditioned' attic space that must NOT be ventilated to the exterior.
- B. Foundation walls in unheated crawlspaces, were applicable, should be insulated with R19 insulation and all air gaps should be fully sealed to prevent air infiltration.
1. Conditioned crawlspaces with 2" concrete slurry slabs are preferred over unconditioned and insulated crawlspaces.

See applicable building codes or zoning ordinances for complete compliance requirements.

10-2 Exterior Walls

Basic Design Standard:

Newly constructed exterior walls shall be insulated according to current code requirements.

Compliance Minimums: A. Any exterior walls exposed during rehabilitation or new exterior walls shall be insulated to a minimum of R 13 or higher. This insulation shall be protected by a vapor barrier toward the interior of the dwelling.

See applicable building codes or zoning ordinances for complete compliance requirements.

10-3 Openings

Basic Design Standard:

All openings, cracks, and joints in the building envelope shall be sealed to prevent air and moisture infiltration.

Compliance Minimums:

A. All openings, cracks, and joints in the building envelope shall be caulked or otherwise sealed. The bottom exterior edge of the siding shall remain un-caulked to allow moisture drainage.

*Siliconized acrylic is recommended for general caulking.

B. All loose and brittle caulking shall be replaced.

C. Openings in plates or wall cavities which allow air circulation from walls into attics or crawl spaces shall be sealed to prevent heat loss and flame spread.

See applicable building codes or zoning ordinances for complete compliance requirements.

10-4 Exterior Doors

Basic Design Standard:

Exterior doors shall be weather-stripped or otherwise made weather tight.

Compliance Minimums:

A. Doors and windows shall be weather-stripped or made as weather tight as practical to reduce infiltration of air. Storm doors are suggested on all exterior doors and particularly uninsulated and non-weather-stripped existing doors.

B. Attic doors or hatches shall be well fitting and insulated.

See applicable building codes or zoning ordinances for complete compliance requirements.

10-5 Windows

Basic Design Standard:

All single glazed windows will conserve energy if a storm unit is provided.

Compliance Minimums:

A. Unless impractical, inoperable, non-insulating, window units shall have fixed pane storm units and operable, non-insulating, windows shall have operable storm units.

B. Newly installed units on operable windows shall be storm/screen units.

C. The frames of aluminum combination units shall have 1/8" drainage space between the bottom of the aluminum storm window and window sill.

NOTE: Storm window units are not required for attic windows. Storm window units are not required where there are thermo-pane window units, existing or to be installed.

See applicable building codes or zoning ordinances for complete compliance requirements.

10-6 Ductwork and pipes

Basic Design Standard: Heating/cooling ductwork and water supply piping in unconditioned spaces shall be insulated.

Compliance Minimums:

A. Pipe insulation shall be R-2 or, greater, and duct insulation shall be R-4 or greater in unconditioned spaces such as crawl spaces and non-habitable attic areas. Duct seams shall be tightly sealed to reduce air leakage.

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 11: OCCUPANCY

11-1 Occupancy

Basic Design Standard:

Every dwelling unit shall have adequate space for each occupant.

Compliance Minimums:

A. There shall be at least 150 square feet of floor space for the first occupant and 100 square feet for every additional occupant. The floor space shall be calculated on the basis of the total habitable room areas. Habitable rooms, except kitchens, shall not be less than seven feet in any horizontal dimension.

B. The ceiling height of any habitable room (any room of 50 square feet or more) shall be at least seven feet, except that in any habitable room with a sloping ceiling at least one half of the floor area shall have a ceiling height of at least seven feet. The floor area of any part of such a room where the ceiling height is less than five feet shall not be considered in computing the total floor area of the room to determine the maximum permissible occupancy.

C. Every sleeping room for one occupant shall contain at least 70 square feet of floor space; every sleeping room for more than one occupant shall contain at least 50 square feet for each occupant thereof.

D. In constructing a new room or converting an existing room, none of the following shall be allowed:

1. A primary bathroom used by occupants of more than one sleeping room when the only access is through one sleeping room.
2. A bathroom or water closet compartment which is the only passageway to any habitable room, hall, basement, or cellar or to the exterior of the dwelling unit.
3. A sleeping room when the only access is through another sleeping room.
4. A sleeping room with direct access to the garage.

E. No basement shall be used as a habitable room of a dwelling unit unless:

1. The floors and walls are impervious to the leaking of underground and surface run-off water and are insulated against dampness.
2. Every window which is below the grade of the ground adjoining such window has a light-well or area-way extending at least 36 inches out from the window the entire depth and width of the window.

F. No cellar shall be used as a habitable room of a dwelling unit.

G. Rooming houses, rooming units, dormitories, and dormitory rooms shall comply with City of Evansville Codes.

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 12: FIRE SAFETY

12-1 Exits

Basic Design Standard:

Every dwelling unit shall have proper exits to the exterior.

Compliance Minimums: A. Every dwelling unit shall have at least two means of exit leading to safety, one of which must be at least six feet six inches in height.

- B. All exits from a dwelling unit shall be unobstructed.
- C. Access to or exit from a dwelling unit shall not be through another dwelling unit.

See applicable building codes or zoning ordinances for complete compliance requirements.

12-2 Sleeping Rooms

Basic Design Standard:

Every sleeping room shall have proper exits to the exterior.

Compliance Minimums:

- A. Every sleeping room shall have at least one operable window or exterior door approved for emergency exit or rescue. The units must be operable from the inside.
- B. Where windows are provided as a means of exit, they shall have a sill height of not more than 44 inches above the finished floor.
- C. All exit or rescue windows from sleeping rooms must have a minimum net clear opening of 5.7 square feet. The minimum net clear opening shall be 22 inches in height and 20 inches in width.

See applicable building codes or zoning ordinances for complete compliance requirements.

12-3 Smoke Detectors

Basic Design Standard:

Every dwelling unit shall have properly functioning smoke detectors.

Compliance Minimums:

- A. Each sleeping area shall be provided with a minimum of one approved, listed, and labeled smoke detector. The detector, which may be battery or electrically operated, shall be installed in a manner and location consistent with its listing. If installed on the ceiling, it shall be within 4 inches of the wall. If installed on a wall, it shall be not more than 12 inches from the ceiling. Smoke detectors shall sense visible or invisible particles of combustion. When actuated, the detector shall provide an alarm suitable to warn occupants within the sleeping area.
- B. A minimum of one detector shall be installed on each additional story, including basements, but not crawl spaces or unfinished attics.
- C. There are special fire safety requirements in buildings with three or more units attached. See Appendix.

See applicable building codes or zoning ordinances for complete compliance requirements.

12-4 Hazardous Material Storage

Basic Design Standard:

No highly flammable materials shall be stored in a dwelling and other materials shall be stored so as not to constitute a fire hazard.

See applicable building codes or zoning ordinances for complete compliance requirements.

12-5 Fuel Burning Appliances

Basic Design Standard: All fuel burning appliances in garages or other attached structures must be installed according to current mechanical and electrical code.

Compliance Minimums:

- A. Heating and cooling equipment located in a garage and which generates a glow, spark, or flame capable of igniting flammable vapors shall be installed with the pilots and burners or heating elements and switches at least 18 inches above the floor level.
- B. Where such appliances installed within a garage are enclosed in a separate, approved compartment having access only from outside of the garage, such appliances may be installed at floor level, provided the required combustion air is taken from and discharged to the exterior of the garage.

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 13: HAZARDOUS MATERIALS

13-1 Lead Based Paint

Basic Design Standard:

Every dwelling unit shall be in compliance with current lead paint regulations and restrictions when the presence of lead based paint is found or suspected.

Compliance Minimums:

- A. All units in a project assisted with federal funds must comply with 24 CFR 35, the regulations implementing the "Lead-Based Paint Poisoning Prevention Act" and/or must comply with all lead safe practices described with RRP (Renovation, Repair, and Painting Program - 40 CFR Part 745) rules whenever paints that date prior to 1978 are suspected to exist and are to be disturbed.
- B. Tenants and prospective purchasers, including first-time homebuyers, of structures built before 1978 must be notified that the property may contain lead-based paint, and of the hazards symptoms, and treatment of such poisoning.
- C. All painted surfaces in assisted housing structures built before 1978 shall be examined for defective areas (cracking, scaling, peeling, chipping, or loose) and if found, shall be eliminated from both the interior and exterior of the building.
- D. The contract shall include language prohibiting the use of lead-based paint.
- E. There shall be documentation in the project file that these actions have been taken.

See applicable building codes or zoning ordinances for complete compliance requirements.

13-2 Asbestos

Basic Design Standard:

Every dwelling unit shall be in compliance with current asbestos regulations and restrictions when the presence of asbestos is found or suspected.

Compliance Minimums:

- A. Every dwelling shall be in compliance with all applicable local, State, and Federal laws and regulations for handling asbestos containing materials (ACM's) in properties or buildings undergoing rehabilitation.
- B. Where asbestos materials are identified by Local Public Agency (LPA) personnel, or LPA personnel suspect the presence of asbestos materials, they shall so notify the owner and inform the owner of the potential hazards and the owner's responsibilities for finding out which applicable Federal, State, and local law will apply to their situation and the ACMIs in the building.
- C. The Vanderburgh County Health Department samples suspected asbestos containing materials and makes recommendations on proper repair/ removal.

D. The Vanderburgh County Board of Health enforces the County and City regulations which apply to demolitions, renovations, and asbestos abatement projects.

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 14: SANITATION

14-1 Waste Disposal

Basic Design Standard:

Every dwelling unit shall have adequate facilities for the proper storage and disposal of garbage, trash, and organic wastes.

Compliance Minimums:

A. Every occupant of a dwelling or dwelling unit shall store and dispose of all garbage, refuse, and any other organic waste which might provide food for insects and/or rodents in a clean, sanitary, and safe manner.

B. All garbage cans and refuse containers shall be rodent-proof, watertight, structurally sound with tight-fitting covers or similar closures, and shall be maintained at all times in a clean, sanitary condition.

C. The total capacity of all provided garbage and/or refuse cans and bulk storage containers shall be sufficient to meet the needs of the occupants of the dwelling. Property owners shall provide a dumpster at complexes with ten or more units.

See applicable building codes or zoning ordinances for complete compliance requirements.

14-2 Condition of the Premises

Basic Design Standard:

Every dwelling unit and premises shall be kept free of all organic waste, trash, debris, garbage, junk, and other unsafe and unsanitary conditions.

Compliance Minimums:

A. No occupant shall accumulate rubbish, boxes, lumber, scrap metal, junk vehicles, or any other materials in a manner which may provide a rodent harborage in or about any dwelling, dwelling unit or its premises. Usable stored materials shall be stacked neatly and elevated at least 18 inches above the ground or floor.

B. Every occupant of a dwelling unit shall keep all supplied fixtures and facilities therein in a clean and sanitary condition and shall be responsible for the exercise of reasonable care in the proper use and operation thereof.

C. When requested to do so by a representative of the Community Development Department or other legally empowered agency, the building owner shall remove junk, trash, debris, garbage, and other unsafe and unsanitary materials from the premises before, during, and after the rehabilitation process.

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 15: PEST CONTROL

15-1 Insects, Vermin, Rodents

Basic Design Standard:

All structures and premises shall be free of insects, vermin, and rodent infestation.

Compliance Minimums: A. The lot, any accessory buildings, and the dwelling interior shall be free from insects, vermin, and rodent infestation.

- B. It shall be the primary responsibility of the building owner to have such problems treated when they exist.
- C. When requested to do so by a representative of the Community Development Department, the building owner shall have the premises treated for insects, vermin, and/or rodent infestation prior to the undertaking of the rehabilitation process.

See applicable building codes or zoning ordinances for complete compliance requirements.

15-2 Termites

Basic Design Standard:

All structures shall be termite free.

Compliance Minimums:

The property shall be inspected for termites. When there are indications of termites, it shall be the primary responsibility of the building owner to have a termite inspection by certified personnel and to obtain any needed treatment for the structure.

See applicable building codes or zoning ordinances for complete compliance requirements.

SECTION 16: ZONING

16-1 Zoning

Basic Design Standard:

All buildings shall be in compliance with all applicable zoning regulations.

Compliance Minimums:

The following situations may constitute potential zoning violations. A non-conforming use may disqualify an applicant for assistance.

- A. The lot contains more than one dwelling.
- B. The dwelling has been converted to more units than were originally intended.
- C. A detached garage has been converted to habitable space or a dwelling unit.
- D. Basement habitable space is used for sleeping or kitchen facilities.
- E. Sleeping rooms are leased or rented.
- F. The dwelling is a rooming house.
- G. A business is operating out of a house. (Example: a beauty shop).

Whenever any of the preceding conditions are found to exist, the building owner shall provide written proof of approval of the conditions from Community Development. In the event the building owner does not possess the required approval, he shall obtain such approval from Community Development prior to the undertaking of the rehabilitation project.

See applicable building codes or zoning ordinances for complete compliance requirements.